



G•WIN

General Mills
Worldwide Innovation Network

Connected Innovation: The Power of Many

Lisa Pannell, Ph.D.
January 19, 2011



GENERAL MILLS

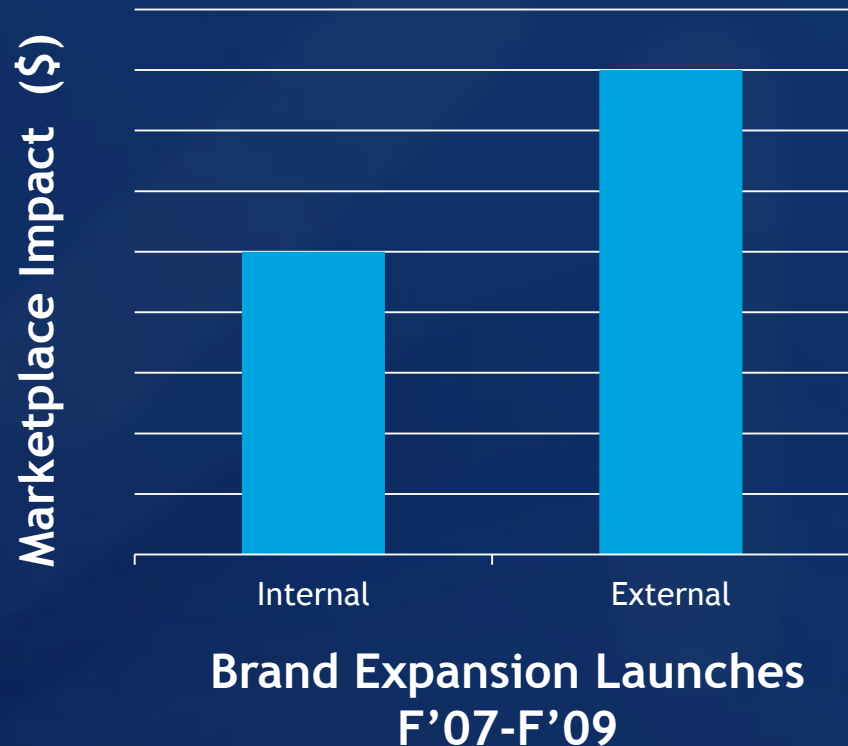
Why Connected Innovation

- Current innovation model unsustainable
 - New food channels & competitors
 - Global expansion
 - Many opportunities with limited resources
- Not all the “smart” people work for us
 - GMI holds <1% of US food patents
 - More R&D being done by small companies
- Too many “smart” people work for us
 - GMI has 1200 Scientists and Engineers
 - Impossible to know all of the projects, experts and IP

Advantages to Connectedness

1. Speed to market
2. Lower risk exploration
3. Access to incremental resources
4. More impactful product launches

Launches with significant external component had 1.6X in-market impact



Connected Innovation Lessons Learned

1. Know What You Want
2. Tell People What You Need (Break Down the Walls)
3. Build a Connection Mindset
4. Start Small (Think Like a Start-Up)
5. Demonstrate Some Quick Wins
6. Continue to Think About What's Next

Know What You Want

Consumer Need

I want less of the “bad” stuff in my food

Business Need

We want to offer a reduced sodium line of soups

Technical Need

I need to reduce sodium without negatively impacting taste

Problem Statement 1

Seeking natural products that contain, or technologies that produce, high sources of free glutamate compounds

Problem Statement 2

Seeking innovations to block bitter receptors or mask undesirable bitter off-flavors



Break Down The Walls

“I never knew other people in the organization were working on something similar”

“We usually have to guess what General Mills wants”

“I was in Minneapolis and didn’t know who to call at General Mills”

We Need...

GENERAL MILLS NOW CONFIDENTIAL BRIEF

Overview:
General Mills is looking for technology collaborations or partners to supply bitter blocking or masking technologies.

Action Items:

Step 1: Click on the link below to submit a proposal.

Step 2: Create your non-confidential proposal to submit to General Mills.

Step 3: When you are ready, provide your contact information and also submit your proposal will be sent to General Mills.

Step 4: General Mills will review your proposal within two to three weeks and together we will decide on appropriate next steps, if any. Examples include:

- Proof of concept
- Licensing agreement
- Possible supply agreement
- Joint venture
- Other

Financials:
In Stage 4, General Mills is willing to fund proof of concept demonstrations for up to \$50,000.

Non-confidential:
By submitting a response you represent that the response does not and will not be deemed to contain any confidential information of any kind.

Seeking novel, food-grade approaches or technologies that block or mask bitter flavors

Innovation Need:

General Mills, a \$15+ billion dollar (U.S.) food company, has the following challenge: Novel and highly effective, food-grade compounds or technologies for blocking bitter receptors or masking bitter flavors.

Within a food system there are many ingredients present that specifically act on receptors in the gustatory system of a consumer that result in taste perception. Many of these taste receptors include G-protein coupled receptors (GPCRs) for bitter tastes. We seek proposals that present approaches or technologies that significantly block these receptors and/or mask bitter flavors resulting from food ingredients.

Possible Approaches:

- Modulation of bitter receptor(s)
- Masking bitter off-flavors(s)

Criteria:

The technology or approach does not significantly alter the existing flavor profile of a food, as judged by an in-house sensory taste panel. Therefore, it is taste neutral.

It does not impact the chemical behavior within the food matrix.

The proposed solution is thermally and chemically stable.

Must be GRAS (General Recognized as Safe) approved or could be approved in the foreseeable future.

Natural ingredients are preferred.



Figure: G-protein coupled receptor of bitter taste



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open innovation

WELCOME & OVERVIEW
FORMATION
ION PROCESS
ION FAQs
ION FORM

General Mills Worldwide Innovation Network (G-WIN)

Ken Powell
Chief Executive Officer

SEEKING: Innovations to block bitter receptors or mask undesirable bitter off-flavors.

Problem: Within a food system there are important ingredients that act on taste receptors producing desirable and undesirable flavor perceptions

Our Needs: Reduction of bitter flavor perception.

Possible Plays:

- Modulation or antagonism of bitter receptors
- Maskers of bitter off-flavors



Send non-confidential response to:
Barrie Froseth
Barrie.Froseth@genmills.com

Visit our technology submission site at
www.genmills.com/WIN



“Connection” vs. “Invention”

**Invention
Model**



**Connection
Model**



**Internal
Collaboration**

**Collaboration
with Trusted
Partners**

**Collaboration
with New
Partners**



**The
lab is
my
world**

**The
world
is my
lab**



Internal Collaboration






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Ask a Question

TechConnect is an online resource for the technical community at GMI. Use it to facilitate connections with others to answer questions, find experts, share opinions, or solve problems. Give it a try! You'll get answers and advice from the broader technical community, as well as external experts from YourEncore.

Looking for operating expertise 	Rula Rana	0	10/12/2009 10:25 AM	
Where is the origin of (DRI) Feed Sales (ingredients particularly cornmeal and other)? 	Stephen Michael Miller	2	10/12/2009 10:45 AM	
Why do you keep saying experts not there?	Jonathan Graham	0	10/12/2009 10:50 AM	
What is (DRI) Feed Production Expert?	Renee Smith	0	10/12/2009 10:52 AM	
Experience of looking through the glass structure?	Renee Smith	0	10/12/2009 10:53 AM	
Moving Performance in a Single vs. Double Action Bender	Renee Smith	0	10/12/2009 10:54 AM	
Reclaiming product from a pump?	Renee Smith	0	10/12/2009 10:55 AM	
Reclaiming experience in context?	Renee Smith	0	10/12/2009 10:56 AM	
Looking up differences from plant plant to plant with respect to...	Renee Smith	0	10/12/2009 10:57 AM	

Collaboration with Trusted Partners?

“General Mills is a closed organization to many suppliers...open communication with strategic partners is key in developing a mutually beneficial relationship”

Strategic Supplier Survey, 2005

Collaboration with Trusted Partners!

40 Supplier
(CEO/CTO)

22 Technical
Needs Briefs

GMI Senior
Leaders

2 Day
Conference

200+ Proposals

71 in Further Assessment

Making Progress

“We have much greater clarity on the General Mills strategies & needs – we no longer have to read the tea leaves.”

Strategic Supplier, 2009

Uncovered New Opportunities



Consumer Need
+
Technology

In-Market Success

Collaboration with New Partners?

“...it is General Mills policy not to review, accept, or fund any submitted idea from outside the company”

GMI Response to Technology Broker

April 21, 2005

Inviting Contact through G-WIN



GENERAL MILLS



open innovation

WELCOME & OVERVIEW

VIEW OUR INNOVATION OPPORTUNITIES

SUBMIT YOUR NOVEL IDEA

G-WIN INFORMATION

SUBMISSION FAQs

General Mills Worldwide Innovation Network (G-WIN)




At General Mills, our goal is to make consumers' lives healthier, easier, and richer. Millions of people around the globe enjoy our products every day, and we count on new product innovation to help us continue to meet the evolving needs of those consumers.


We believe that there is a great opportunity for us to enhance and accelerate our innovation efforts by teaming up with world-class innovators from outside of

“We believe that there is a great opportunity for us to enhance and accelerate our innovation efforts by teaming up with world-class innovators from outside our company.”

Sharing Key Needs


GENERAL MILLS

[Welcome and Overview](#)
[Innovation Opportunities](#)
[Submission Process](#)
[About](#)
[Innovation Portal](#)

[Login](#) [Register](#) 

Innovation Opportunities

[Register](#) to become a member of the General Mills Worldwide Innovation Network and receive notifications when new needs are posted.

[Abstract Version](#) [Summary Version](#)



< 1 - 5 of 49 | [Next](#) [Last](#)

[Novel Dairy or Dairy Ingredients for Human Health](#)

Posted:2009-10-01

Milk and cultured dairy products are complex entities containing many components and combinations of components that are potentially positive for human health and nutrition. In particular, milk and cultured dairy components are expected to have positive effects on human bone health, nutritional adequacy, weight management, heart health, digestive health and other emerging health areas. We seek proposals that present approaches or technologies based on milk and cultured dairy that could lead to positive health effects when incorporated into the diet via a food product.



[More Details](#)

 [Share](#)  [Create Proposal](#)

[Dairy or Dairy Ingredients for Bone Health](#)

Posted:2009-10-01



Milk and cultured dairy products are complex entities containing many components and combinations of components that are potentially positive for human bone health. Also, milk is naturally associated with certain fortificants, such as vitamin D. Therefore for this brief, vitamin D is considered in scope, as well as components inherent to milk. There could also be processes which increase the bone health benefits related to the milk or cultured dairy product. We seek proposals that present approaches or technologies based on milk and cultured dairy that could lead to positive bone health effects when incorporated into the diet via a food product. [More Details](#)

 [Share](#)  [Create Proposal](#)

[Enhanced Sweetness of Simple Carbohydrate Sugars](#)

Posted:2009-10-01

Not all carbohydrate sugars are equally sweet. Sweet taste receptors can be modulated, to increase the perceived sweetness of carbohydrate sugars. We are seeking food grade ingredients that would have this effect. We seek proposals that present approaches or technologies that could lead to enhanced sweetness of carbohydrate sugars such as sucrose, fructose, lactose, and glucose in a food product. [More Details](#)

 [Share](#)  [Create Proposal](#)

“Viral” Campaigns



Provide non-confidential response to:
Barrie Froseth

Barrie.Froseth@genmills.com

Or through our technology submission site at
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Think Like a Start-Up

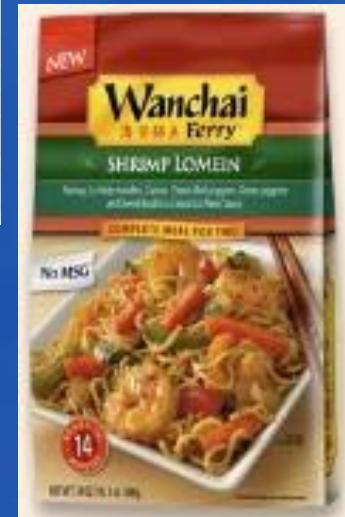
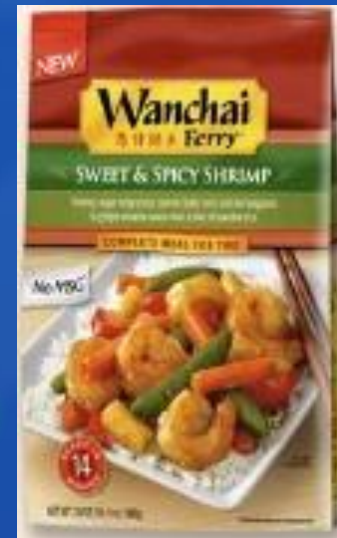
Team Composition

- Small, nimble teams, “Internal” consultants
- Respected colleagues with strong networks
- People with passion for change and who will make stuff happen
- Lead from behind

Start-up Strategy

- Benchmark best in class companies
- Run small-scale pilots to create success stories
- Pair up with a willing partner
- Scale successes and systematize

Demonstrate Quick Wins



Buy your Start-Up Back!



Judi Morris



Jenny Maack-Mcaab



Lisa Pannell



Beth Melcher



Cathy Stocker



Alec Hopkins



Scott Kirkwood



David Nathan



Peeyush Maheshwari



Kim Stern



Xia Liu



Matt Lorence



Lisa Kopas-Lane



Tom Boileau



Olaf Gruess



Petros Levis



Katie Ohotto

Innovation Entrepreneurs (IE's)

- Division-based resources
- Articulate needs
- Build connections
- Assess opportunities
- Integrate opportunities into division pipeline

What's Next

Best Practices → **Next Practices**

Next Practices

- **New Tools for Connecting**
 - A developers “workbench” that speeds the connection to innovation partners
- **Ways to Play Larger**
 - Consortia:
 - Defray research costs and share risks
 - Create scale for implementation
 - Accelerate development of solution
 - **Global Scouting Network**
 - Identify expertise
 - Build relationships
 - Manage Projects

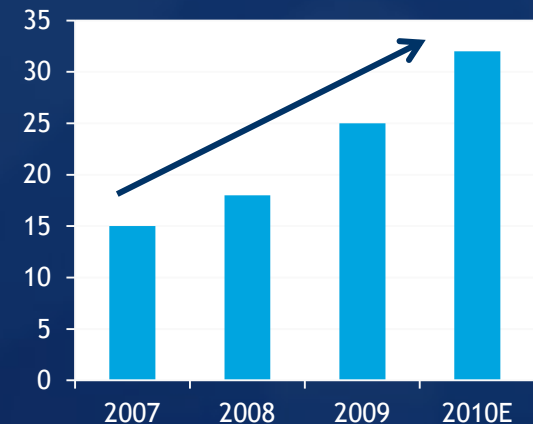
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Portfolio of Connected Innovations



% New Product Launches Externally Enabled





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Worldwide Innovation Network

Thank You



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